DOCUMENT RESUME

ED 416 311 CE 075 446

AUTHOR Alexander, Edith E.; Jeffries, Dianne
TITLE Distance Learning in Joint Public Affairs and Visual Information Training.
PUB DATE 1997-12-00
NOTE 11p.; Paper presented at the Interservice/Industry Training, Simulation and Education Conference (19th, December 1-4, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adult Education; *Distance Education; *Educational Technology; *Military Training; Pilot Projects; Postsecondary Education; Program Design; Program Development; *Public Affairs Education; Public Opinion; Visual Aids

ABSTRACT

An initiative was undertaken to introduce technology-enabled and distance learning to the Defense Information School (DINFOS), Ft. Meade, Maryland. The effort to introduce instructional technology reflected the need to find a creative solution to Armed Forces requests for increased student quotas, reduced pool of military instructors, and an expanded career field curriculum. Additionally, reduced travel dollars suggested the need to apply technology to minimize resident training. The expansion of technology into resident training would be justified by both greater instructional efficiency and superior instructional effectiveness. A three-phase approach was adopted to ensure that the processes of plan, do, and check were thoroughly completed before implementing a technology-enabled program to the DINFOS curriculum. Phase I gathered information about instructional technology and distance learning programs. In Phase II, a pilot project evaluated use of selected technologies with learners, instructors, and curriculum. The revised Public Affairs Officers Course, Reserve Component was selected for the pilot. Initial steps in the design and development of the pilot were taken with the intent of allowing evaluation of: (1) effectiveness of selected training media and technologies; (2) critical factors in administering a joint Armed Services distance learning program; and (3) the Services' response to the different delivery systems. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 416 311

DISTANCE LEARNING IN JOINT PUBLIC AFFAIRS AND VISUAL INFORMATION TRAINING

Edith E. Alexander, Ph.D.
Dianne Jeffries
American Forces Information Service
Alexandria, Virginia

ABSTRACT

The purpose of this paper is to report the progress of an initiative to introduce technology-enabled and distance learning to the Defense Information School (DINFOS), Ft. Meade, Maryland. The effort to introduce instructional technology reflects the need to find a creative solution to joint-Service [1] requests for increased student quotas, reduced military instructor manpower, and an expanded career field curriculum. Additionally, reduced travel dollars suggest the application of technology to minimize resident training.

The conversion of a pilot course was undertaken as a way to provide "proof of principle" for meeting joint-Service requirements through technology. Although each of the military Services has already demonstrated the successful use of technology to deliver training at a distance, [2] the unique considerations posed by the joint environment suggest a cautious approach to the investment required in a large scale conversion of the curriculum. The pilot enables us to evaluate: (1) the effectiveness of selected training media and technologies, (2) the critical factors in administering a joint-Service distance learning program, and (3) the Services' response to the different delivery systems. At the same time, we can assess our ability to leverage in-house expertise in broadcasting, videography, graphics, instructor training, and curriculum development to convert and deliver other DINFOS courses.

This paper will describe the rationale and issues in redefining resident training, and the strategy that was articulated to introduce technology to meet common core, joint-Service, and Service-specific training requirements for officer, enlisted, and civilian personnel in the career fields of Public Affairs and Visual Information in the Army, Navy, Air Force, Marines, and Coast Guard. The initial steps in the design and development of the pilot will also be described.

ABOUT THE AUTHORS

Dr. Edith Alexander is the action officer for instructional technology issues in the Training Directorate of the American Forces Information Service (AFIS), a DoD Field Activity. She also serves as adjunct instructor for the Defense Information School (DINFOS) at Ft. Meade, Maryland and manages the development of Training Programs of Instruction for education and training curricula at DINFOS. She has a Ph.D. in Foreign Language Education from The Ohio State University.

Dianne Jeffries serves as senior instructional systems specialist in the Training Directorate of AFIS. She exercises management control and direction of the development of joint-Service common core and Service-specific education and training programs for the Defense Information School (DINFOS) and the Defense Photography School, soon to relocate to Ft. Meade, Maryland. As part of her duties, she negotiates technical training requirements with representatives from each of the military Services at the Training Task Selection Boards. She holds an EdM in Education (Counseling).

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

E E Alexander

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

BEST COPY AVAILABLE

CE 075442

DISTANCE LEARNING IN JOINT PUBLIC AFFAIRS AND VISUAL INFORMATION TRAINING

Edith E. Alexander, Ph.D.
Dianne A. Jeffries
American Forces Information Service
Alexandria, Virginia

BACKGROUND

DINFOS is the principal resource in the Department of Defense for joint-Service Education and Training in the career fields of Public Affairs (PA) and Visual Information (VI). Under the functional control of the American Forces Information Service (AFIS), DINFOS provides professional and vocational training through the conduct of over 30 PA and VI courses. The training includes entry level courses, which are required for awarding specific military occupational specialties, and advanced courses for professional development. (See Figure 1.) Because the typical student attends DINFOS immediately following initial assignment for basic military training ("boot" camp), military skills training ("soldierization") is viewed as an additional outcome to joint-Service occupational skill training.

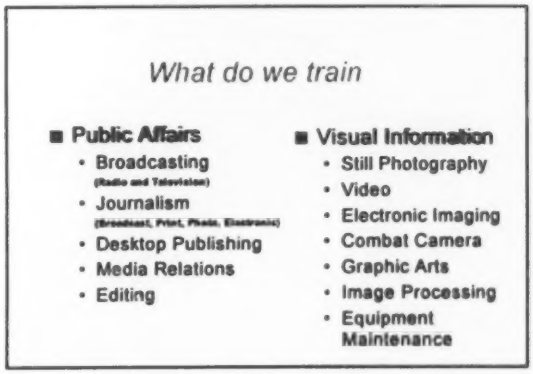

Figure 1. DINFOS Training Program Overview

Individual course lengths range from 1 week to several months in duration, and include both knowledge-based and performance-based tasks. Additionally, some tasks, such as those in the maintenance courses, require hands-on experience with large or expensive equipment. While most courses are taught in residence at the schoolhouse, a small number of exportable courses send teams of instructors to remote sites to meet training needs. Additionally, correspondence courses have been used to augment a limited number of DINFOS courses. [1]

The development of high quality, joint-Service training programs is facilitated through the successful conduct of the Training Task Selection Board (TTSB), and its principal product, the Training Task Inventory (TTI). The TTSB is the principal forum where military Service representatives come together in a consensus-building setting to identify career field training requirements. The TTI documents the agreed-upon training tasks and identifies the training importance and competency, either knowledge-based or performance-based, for both joint and Service-specific tasks. This designation helps guide the instructional methodology to be deployed in the classroom: lecture, discussion, performance exercise, role-play, or case study.

The instructor contact hours (ICH) for each course determine the number of instructors needed. The ICHs are derived from the instructional content and the recommended training strategy. Those blocks of instruction that train knowledge tasks are generally allocated a single instructor. [2] Blocks of instruction that contain performance exercises, however, may require a smaller student:instructor ratio, particularly when safety is a consideration (as would be the case, for example, when operating machinery). Additional instructors are then assigned to assist during the performance block. Instructor manning requirements are allocated among the participating Services, using the Interservice Training Review Organization (ITRO) formula, which calculates fair share staffing requirements using instructor contact hours, number of annual iterations, and requested Service student quotas.

The Instructional Systems Development (ISD) model is used by DINFOS for the design and development of the curriculum, which is effected through a cooperative effort between the Curriculum Development Department (CDD) and the Subject Matter Experts (SMEs) for each course.

RATIONALE FOR TECHNOLOGY-ENABLED LEARNING

Investment in instructional technology is frequently justified by its use in distance learning and the demonstrated cost savings in travel and per diem expenses. However, the mission of DINFOS, to provide basic occupational specialty training and professional development in a joint-Service environment, suggests caution in the full scale application of non-resident training.

Resident training adds to the soldierization of new recruits, an outcome that cannot easily be supported by the physical separation of the instructor and the students. Furthermore, convenient access to necessary hardware and software differs markedly among the Services and among reservists and civilians. Active and reserve units also differ in the time that they have available for study and in their ability to participate in distance learning when it is scheduled in classroom settings such as satellite broadcast.

Limiting the use of technology to distance delivery of professional development courses greatly reduces the size of the training audience and the return on investment. If instead, technology is applied to resident as well as non-resident instruction and for distance delivery of selected modules instead of entire courses, then the investment can be justified for a broader span of curriculum and for a larger audience. This expansion of technology into resident training must, however, be justified by both greater instructional efficiency and superior instructional effectiveness.

Instructional Efficiency

A wider application of technology offers significant economies in supporting and expanding the DINFOS curriculum. For example, among the costs associated with traditional resident training is instructor labor. The efficient use of instructor staff is critical because the Services provide the bulk of the instructors for PA and VI training, [3] and do so by drawing on their own manpower. Technologies that can facilitate the desired learning outcomes can reduce instructor contact hours by replacing "podium time," thereby reducing the number of instructors needed. Figure 2 shows how technology may be used to reduce the instructor contact hours in tasks that require hands-on performance with equipment. Here, technology is used to deliver instruction alternately to each half of the class (A or B), allowing a single instructor to alternate the hands-on performance tasks between the two groups. The staggered use of equipment in this scenario also reduces the number of equipment units needed to support training.

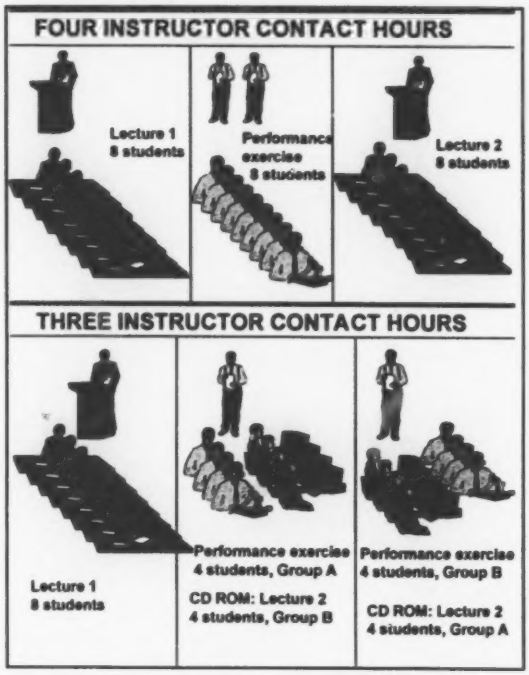

Figure 2. Technology as an adjunct to resident training to reduce instructor contact hours

Similarly, technologies that allow students to work at their own pace and own convenience allow as much as 30 percent more learning in 40 percent less time. [4] This becomes more important as career field requirements expand without an accompanying growth in training budgets. Training tasks are added to a course through the TTSB process, and are often done in response to changing field requirements. For example, the use of the digital camera required

BEST COPY AVAILABLE

additional training tasks in courses such as photojournalism, video production documentation, and basic broadcasting. When training requirements are increased, but an extension of the resident training period cannot be accommodated by the participating Services, compromise must be reached on what training can be accomplished. If technology is used for on-site delivery of prerequisite instruction, such as background information, basic definitions, and introductory concepts, then distance learning becomes a cost-effective way of expanding the curriculum.

Instructional Effectiveness

The overriding objective for introducing technology-based instruction, either as an adjunct to resident training or for distance delivery, is to support and improve student learning. Technology offers opportunities to individualize instruction, motivate and maintain interest, and standardize and clarify critical content. Technology also provides a way to disseminate current information in volatile subject areas.

For example, some delivery systems, such as computer-based instruction, Internet, videotape, and audiotape, allow students to work at their own pace, convenience, and with the opportunity to review complex material or skip familiar information, as needed. By accommodating individual rates of learning, such individualization is highly motivating. In fact, higher levels of mastery and retention are associated with active learning, as occurs when graphics, animation, sound effects, narration, and live-motion video create a highly participative learning experience.[5] Moreover, "hot links" in intelligent programming or on the Internet allow individualization of content because students are enabled to pursue topics of special interest in greater depth. In the joint environment, this option would provide an avenue for Service-specific training.

Media-based training usually reflects a high quality of instruction because the content is carefully selected to include the most comprehensive and relevant teaching points. Furthermore, because the instruction is scripted and recorded onto media, the content is presented accurately class after class in clear, focused, and concise presentations. Such courseware allows instruction to be standardized for use in multiple courses within an integrated curriculum while ensuring that critical points are conveyed in a consistent manner. Table 1 shows a sample of training tasks that are shared among the Public Affairs Officers Course (PAOC), Advanced Public Affairs Officers Course (APAOC), Senior Enlisted Public Affairs Course (SEPAC), Joint Public Affairs Course (JOPAC), Joint Public Affairs Supervisors Course (JPASC), Media Relations Course (MRC), and the Coast Guard Public Affairs Course (COPAC).

Table 1. Common training tasks in the Public Affairs curriculum

TRAINING AREAS/COURSES	PAOC	APAOC	SEPAC	JOPAC	JPASC	MRC	COPAC
Mission of DoD PA	X			X	X		
Joint PA Planning and Conduct	X	X	X	X	X		
PA 4 Step Problem Solving Process	X						X
Community Relations	X				X		X
FOIA	X			X		X	X
Media Relations	X		X	X	X	X	X
Crisis Communications	X	X	X	X			
Command Messages	X			X	X	X	X

The benefits of technology as an adjunct to classroom instruction suggest, then, that distance learning be viewed as a subset of a broader application of technology in training. (See Figure 3.)

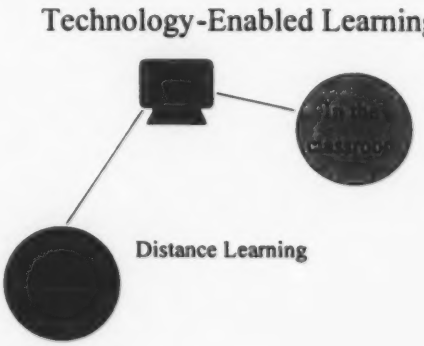

Figure 3. Distance learning as a subset of technology-enabled learning

A STRATEGY

Given the potential for greater instructional efficiency and greater instructional effectiveness through technology, a team comprising AFIS and DINFOS staff was formed to determine how and where technology would be introduced in the PA and VI curricula. The members of the core team included instructional systems specialists, curriculum developers, and information resources management staff. The team later expanded to include Subject Matter Experts (SMEs), after selection of our pilot course, and members of the Faculty Development Branch, in recognition of the need for additional train-the-trainer techniques with the use of new instructional technologies.

A three-phased approach was adopted to ensure that the processes of plan, do, and check were thoroughly completed before implementing a technology-enabled program to the DINFOS curriculum. Phase I would be used to gather information about instructional technology and distance learning programs. In Phase II, a pilot would be conducted to evaluate the use of selected technologies with our learners, instructors, and curriculum. This pilot would be our "proof of principle." In Phase III, the evaluation of the results of the pilot would direct us in recommending specific technologies and a strategy for further implementation of instructional technology at DINFOS. Figure 4 summarizes the questions that directed each phase.

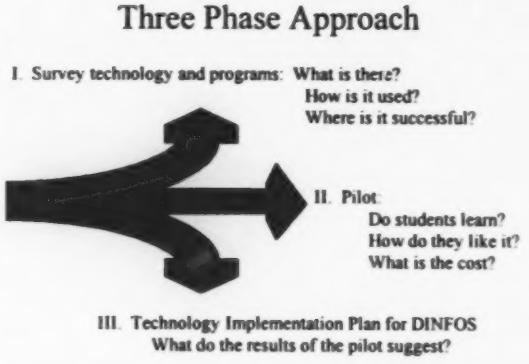
Three Phase Approach
I. Survey technology and programs: What is there?
How is it used?
Where is it successful?
II. Pilot:
Do students learn?
How do they like it?
What is the cost?
III. Technology Implementation Plan for DINFOS
What do the results of the pilot suggest?

Figure 4. Strategy for introducing technology-enabled learning

Phase 1

The purpose of this initial phase was to learn about distance learning technologies and applications. During this six-month period, we observed examples of instructional technology and successful distance learning programs in order to answer the questions: what technology is available?, how does it instruct?, which kinds of curriculum and current instructional strategies are best suited for different media?, and how have others used these technologies successfully? We took advantage of the willing participation by commercial vendors to observe their programs. But most importantly, we examined the programs, lessons learned, and suggestions of the military Services. Not only does DINFOS share a similar target population, but the effectiveness of the military distance learning experience reduces the perceived risk for us in bringing change to the training we conduct for them.

Our review of technology occurred in conjunction with concerted efforts to keep the DINFOS faculty and staff knowledgeable, creatively involved, and supportive. Whenever feasible, demonstrations of technology were scheduled at the schoolhouse to give DINFOS instructors the opportunity to review first-hand the assortment of technologies and instructional programs. Their input helped define and refine expectations for the use of different media. Furthermore, periodic briefings on our progress helped reduce the anxiety that accompanies potential change. In particular, questions and

BEST COPY AVAILABLE

discussion were encouraged to defuse fears that we planned to replace all residential training with distance learning. An open exchange of information from the start of the effort was, in our experience, key to overcoming resistance to the classroom use of instructional technology.

The identification of potential instructional technology and its optimal application were the significant outcomes of Phase 1. Technologies that enable teacher:student and student:student interaction (such as occur in traditional classroom instruction) include satellite broadcast, videoteletraining, and computer-based conferencing (e.g. the Internet) in a synchronous mode of instruction. On the other hand, computer-based instruction, videotapes, audiotapes, and Internet WEB sites enable student:subject interaction by self pacing through asynchronous instruction.[6] Computer-based training (CBT) was the most variable in capabilities and costs. The CBT programs we viewed ranged from mass storage of text on CD ROM to highly interactive and intelligent programs that encouraged high-level problem-solving.[7] Table 2 describes our assessment of the technologies and their compatibility with DINFOS instructional techniques.

Table 2. DINFOS instructional methods matched to technology

INSTRUCTION\TECHNOLOGY	CBT	SAT BROAD CAST	VTT	INTER NET SITE	INTER NET CONF	VIDEO TAPE	AUDIO TAPE
Lecture	X	X	X	X		X	X
Q&A		X	X		X		
Discussion		X	X		X		
Demonstration	X	X	X			X	
Student Performance			X				
Role Play			X				
Independent Problem-Solving	X			X			
Testing	X			X			

Phase II

The purpose of the second phase was to try out the technologies and evaluate their effectiveness with our population and our curriculum. We were reasonably assured of the effectiveness of the technologies under consideration, given the results of their use in the various programs we reviewed. But we were also aware that, given the diversity in our joint, active, and reserve target audience, not all technologies would be equally accessible. Furthermore, given the variety of instructional methods, such as lecture, discussion, performance exercises, role plays, and case studies within our courses, we knew that no single technology could efficiently and effectively train for all objectives. Rather than compare different courses using different technology, we decided to use one course as a pilot and differentially match media to tasks within that course. In this way, we could measure the difference in effectiveness, student affective response, and instructor attitude with a constant target audience. Our administrative plans for handling marketing, registration, distribution of course materials, instructor training, and scheduling of broadcast sessions would also be piloted during this phase.

The selection of a pilot was made easy for us. In June 1996, the TTSB of the Public Affairs Officer Course, Reserve Component (PAOC-RC) met to establish the training tasks of this 80-hour, 2-week course. The attending Service representatives voted to enhance the training in this course by mirroring the training in the nine week PAOC course given for the active military and civilian personnel. In this way, the members of the TTSB added over 250 hours of instruction to the PAOC-RC, while, at the same time, maintaining a maximum 2-week resident training requirement. To accommodate the added training tasks, the TTSB suggested distance learning techniques as a way to deliver the additional training requirements. In addition, they reviewed the established training tasks and designated those they would recommend for distance learning.

The selection of the revised PAOC-RC as a pilot for testing technology-enabled instruction was advantageous in several ways. First, the Services clearly initiated the request for distance learning delivery of this course. By Department of Defense directive, DINFOS provides training in response to the established requirements of the Services. Although a distance learning initiative can be justified as a proactive effort to satisfy future training requirements, the necessary investments are more compelling when a request is made formally by the Services, our customer, through the TTSB process.

Second, while the PAOC-RC is composed of both knowledge-based and performance-based tasks, it does not require student use of equipment. Rather, the performance exercises in this course include skills such as conducting presentations, responding to media queries,

conducting news briefings, and interviewing—skills that can be easily demonstrated by the instructor and performed by students through a two-way video broadcast environment. In addition, the two-week resident portion remains available for face-to-face interaction.

Third, a variety of instructional methods are currently used to present the different knowledge levels represented within the course, ranging from recall, such as recall of the components of the Privacy Act to problem-solving, as in responding to crisis situations. The instructional techniques include lecture, discussion, case studies, and role play--a rich mixture to match to the technologies that we hoped to try out. Of particular interest to us was the possibility of meaningful discussion via camera and monitor; in the distance learning programs that we observed, question and answer exchange rather than discussion was conducted during videoteletraining and satellite broadcast sessions.

Finally, many of the objectives of the PAOC-RC are basic to public affairs and often reappear as prerequisite information, review, or professional development in other courses in the DINFOS Public Affairs Division (PAD) curriculum. By grouping common tasks, we would be able to develop modules that can be used for distance learning or can be used as an adjunct to resident training in the other PAD courses. (See Table 1.) Clearly, the active PAOC can benefit from a media-based delivery of stable curriculum, like the history of public affairs, in an accurate, consistent, and comprehensive presentation. Curriculum that tends to be volatile, such as joint doctrine, can likewise be delivered through appropriate media to practitioners in the field.

The PAOC-RC offers specific challenges as well. As discussed earlier, developing a distance learning program for the reserve component in a joint setting is complicated by the restrictions on availability of this population, as well as by the differences in their access to technology. The large number of instructional hours to be delivered in the revised PAOC-RC, and the accompanying extended need for student support in technical, instructional, and administrative areas, adds to this concern. The reserve component environment, in fact, suggests a delivery design in which schedules are flexible and reserve component resources and expertise are tapped for student instructional support. Given our mutual interest in the success of deploying this course, the members of the 1996 PAOC-RC TTSB, now to be known as the PAOC-RC Working Group, became stakeholders with us in resolving the challenges of the pilot.

CONVERSION OF THE PAOC-RC

The Instructional Systems Design (ISD) process guides the redesign of the PAOC-RC for partial delivery by technology. The analysis phase here refers to the review of training tasks, objectives, and current classroom methodology to select the appropriate delivery media. The design phase includes the sequencing of the media-based blocks of instruction. The development of the course modules, step three, will be done by contract to vendors in collaboration with DINFOS subject matter experts and CDD staff. The delivery of the course, anticipated in FY98 is the next step in the ISD model. Validation and evaluation criteria and procedures will be developed and implemented for each stage.

A partnering agreement was reached with the Graduate School, USDA (GS/USDA) to assist us in the conversion of the pilot course. Known as the "The Government's Trainer," the GS/USDA's Technology Enabled Learning (TEL) department provides support to government agencies in developing distance learning programs. Additionally, they provide contractual access to proven developers of instructional technologies, eliminating expensive and time- consuming procurement procedures. The partnership would enable us to overcome limited human resources at DINFOS in the conversion of the curriculum. The involvement of experienced distance learning professionals would ensure the timely completion of the pilot, while simultaneously allowing us to learn from the experience.

Analysis

The single most important task of analysis is to build blocks of instruction, based on similarity in objectives and instructional methods, so that the appropriate delivery media may be matched. Tools for media selection are, in fact, automated and available on the Internet.[8] These tools analyze course content using descriptors such as access (linear or nonlinear), stability of

content, source of training requirements (regulatory, professional), nature of interaction and feedback, security, and the availability of required information elsewhere (such as the Internet). In describing many of our professional development courses, for instance, we would characterize them as containing regulatory information, "expert" anecdotal field experience, and emerging issues that are likely to require frequent update. These characteristics suggest delivery through broadcast or Internet rather than through computer-based CD ROM programs.

However, we found that because the PAOC-RC contains a variety of tasks, the analysis must be done at the task rather than at the course level. The modularization of this course into blocks of instruction implies a mixture of delivery systems. Figure 5 shows a possible configuration of 18 PAOC-RC knowledge and performance-based tasks, as established by the TTSB, matched with potential technology for delivery of instruction.

BLOCK 1

CD ROM/Internet site
001 The History and Evolution of Public Affairs
002 Joint Public Affairs Doctrinal Mission
003 DoD Principles of Information
004 Nine principles of combat coverage
005 Overall Mission of DoD public affairs
006 Seven principles of joint public affairs operations
007 Levels of Responsibility for planning and conducting joint public affairs
008 Distinctions among public affairs, public diplomacy, propaganda, and psychological operations
009 Three functional areas of military public affairs: media relations, community relations, internal or command information programs
010 Military public affairs and civilian public relations practices
011 Proactive and reactive public affairs
012 The four-step problem-solving process

BLOCK 2

Videoteleconference/Internet conference/chat
012 Application of the four-step problem-solving process

BLOCK 3

CD ROM/Internet site
013 The Public Affairs Officer's role and responsibilities in Service component and joint organizations
014 The communications process and public opinion and their relationship to public affairs
015 Benefits of conducting public affairs research
016 Public affairs research methods and techniques
017 Communication law and its relationship to public affairs (defamation, libel, privacy, copyright)

BLOCK 4

Videoteleconference/Internet conference/chat
018 Discussion of ethics in public affairs

Figure 5. PAOC-RC tasks, as listed in the TTI, grouped for distance learning delivery

Design

The design phase in this conversion includes the sequencing of the modules so as to make the best use of the time spent in face-to-face instruction during resident training. The PAOC-RC instructors unanimously recommended that nonresident training precede the resident training and provide the foundation for a culminating learning exercise—the climax—at DINFOS. The members of the PAOC-RC Working Group further suggested that the USDA Graduate School "Telecycle"[9] be used during the reflective phase, with participation of DINFOS alumni as mentors actively providing their "real world" experience.

The DINFOS staff has also recommended the development of periodic formal assessments or milestones, to ensure that students progress through the curriculum in a timely manner. These "gates" can be realized through the technology, such as Internet testing, and be managed by the student support system, such as by periodic contact from a reserve advisor. Additionally, these gates will help ensure that students come to resident training fully prepared to apply what they have learned.

SUMMARY

An aggressive schedule has been established so that the January 1998 iteration of the PAOC-RC can be delivered in its new format. A sampler of the multimedia courseware will be reviewed before development by DINFOS personnel and the members of the PAOC-RC Working Group. The development phase, to begin in October 1997, will include participation by our staff in broadcasting, videography, graphics, instructor training, and curriculum development. Implementation plans for marketing, scheduling, distribution, assessment, train-the-trainer for PAOC and reserve adjunct instructors, student support and evaluation will be developed concurrently.

The design is, arguably, the most critical element in the use of instructional technology. Our attention to an integrated design for the curriculum as a whole is the key for us to a justifiable return on investment. A number of recommendations may be made on the basis of accomplishments to date of our initiative to implement technology-enabled learning for Public Affairs and Visual Information:

1. Be willing to work for a design. While the temptation to adopt and adapt is tempting (and certainly less complicated), we found that the process of reinvention has sparked our creativity in all areas of the curriculum. For example, the modularization of the PAOC will result in media-delivered blocks of instruction that can be used for prerequisite, review, reference, remediation or professional development, as appropriate, in other courses. The sharing of modules (as envisioned for the PAD curriculum) can be accomplished in our VI curriculum as well.

2. Go beyond briefings and include the stakeholders in the brainstorming. The contributions from the DINFOS staff and the PAOC-RC Working Group were essential to help guide the direction of the program. Although clearly, a core team is necessary to provide sustained progress, a well-informed and participative faculty will not only support the coming changes, but will also add creative solutions and practical advice, as only users of the system can.

3. Think "incremental" for a big impact. Even modest changes in the curriculum can provide big benefits. Our vision to convert the information that comprises prerequisite training for distance learning delivery represents just a fragment of our curriculum. The impact is significant, however, because it will provide us with more time in resident training for additional career field tasks.

4. Make the flow of information bi-directional. Technology can enrich and enhance resident training through input from practitioners in the field—providing a "real time" infusion of lessons learned and future trends. Whether the information flows in or out, technology can help build sustained performance and effective instruction for students and alumni alike.

Footnotes

[1] The Army requires completion of pencil-paper training materials before attendance at the Public Affairs Officer Course-Reserve Component.

[2] Knowledge tasks address information required to develop the skills and abilities for effective accomplishment of duties and jobs. Examples include: simple factual recall, reasoning, problem-solving, analyzing, synthesizing, and evaluating. A knowledge task may be a stand-alone task or an enabling task that supports subsequent performance. The instructional requirements of knowledge tasks include presentation of content, student reaction, and expert feedback.

[3] The combined staff of DINFOS and the Defense Photography School, which will be co-located with DINFOS at Ft. Meade in FY98, includes 175 military and 15 civilian instructors.

[4] Air Force Distance Learning Office, AirForceLINK News Article, 1996

[5] HR Focus, Nov96, Vol. 73 Issue 11, p.11

[6] When the technology enables instruction to occur at the same time as the learning, the training is considered synchronous. Asynchronous instruction, on the other hand, occurs when students engage in learning after the information is conveyed

[7] For information about one source of intelligent, customized computer-based programs, contact Dr. Kemi Jona, The Institute for the Learning Sciences, Northwestern University, Evanston, IL at jona@ils.nwu.edu.

[8] One such tool, 8Ball, can be found at http:/pi.lizardtech.com/~gradschool/8ball

[9] The Telecycle, as defined by the USDA Graduate, School includes three components: prerequisite learning which is self-paced; facilitative learning, which corresponds with our resident training; and reflective learning which is self-directed. We have added to reflective learning the objective of continuous learning.